

North East School Division #200

Differentiated Instruction Handbook



Last update: August 2015

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Preamble – Making the Connections

Differentiated Instruction is responsive instruction; it is effective teaching that responds to students' readiness levels, interests, strengths, and learning profiles. Through ongoing assessment, educators gather information about where students are at in the learning continuum. Based upon this information, teachers vary instructional practice, resources, learning environment, and/or assessment to advance student learning.

Differentiated Instruction is directly connected to both *Understanding by Design* (UBD) as well as *Response to Intervention and Instruction* (RtI). It is also grounded in the philosophy of *Positive Behavioral Interventions and Supports* (PBIS).

In effective classrooms, teachers consistently attend to a multitude of elements including to whom they teach (students); where they teach (environment); what they teach (content); and how they teach (instruction). UBD is predominantly a curriculum design and planning model while the focus of DI's primary goal is ensuring that teachers focus on processes and procedures that ensure effective learning for all students.

Quality classrooms evolve around powerful knowledge that works for each student---that is, they require quality curriculum AND quality instruction. In tandem, UBD and DI provide structures, tools and guidance for developing curriculum and instruction based on our current best understandings of teaching and learning.

RtI is the third component of this equation-----and is grounded in solid planning (UBD) and instruction (DI).

RtI allows educators to proactively identify students who are struggling with academics and/or behaviours. It allows schools to plan collaboratively and to provide targeted interventions to all students. It also aligns with the philosophy that all students can learn and supports the philosophy of inclusion.

Finally, but equally important, PBIS provides the stability required for an instructor to effectively manage the classroom and to deal with behaviours in a positive, proactive and preventative fashion. Once behavioral expectations are outlined, explicitly taught, reinforced and implemented, quality instruction can occur which will address the needs of all students.

When applied together, these four philosophies can provide instructors with the tools they require to address the diverse needs of students in their charge.

As Ron Edmonds said several decades ago, "We can, whenever and wherever we choose, successfully teach all children whose schooling is of interest to us. We already know more than we need to do that." (Edmonds, 1979a, p.23)

The Vocabulary of Differentiated Instruction

Vocabulary Index	Definition
Adaptations	Strategies and supports that may be applied to the curriculum, assessment strategies, environment and/or instruction to enable students to be successful; providing extra time, different resources, and/or alternative modes to demonstrate learning.
Action Research	It is an inquiry process that balances problem solving actions with data-driven analysis or research, enabling the researcher to make decisions regarding practice.
Active Learners	Students that are aware of how they learn, are curious, take responsibility for their learning, and seek out help and/or additional information.
Anchors/Exemplars	Sample of student work that is matched to a specific level of performance.
Assessment	The process of gathering information about student achievement, most often in relation to defined learning expectations. Using a variety of methods can provide information to a variety of users for a variety of decisions.
Assessment <i>as</i> Learning	When an individual student reflects on their own learning and makes adjustments to achieve deeper understanding.
Assessment <i>for</i> Learning	Occurs throughout the learning process as teachers gather as much data as possible to help them know what students can do. Used to understand where the learning gaps may be, resulting in teachers responding to student needs.

Assessment of Learning	The gathering of information about student achievement and program effectiveness to determine the status of learning, to report to the students, their families and the public.
Authentic Assessment	Assesses the outcomes in a context that reflects the actual learning experience. In other words, we assess in the exact same way we have invited students to learn. Authentic assessment also invites us to ask how students may come to apply the knowledge and skills they have gained and assess them based on that information.
Big Ideas	Universal questions/statements that are transferable across grades and disciplines. This results in enduring learning that matters 40 years from now. Big ideas invite the construction of meaning and higher levels of thinking.
Bloom's Taxonomy	A way to classify instructional activities or questions as they progress in difficulty. Within the hierarchy, the activities require different thinking skills.
Broad Areas of Learning	Broad Areas of Learning exemplify what we want students to achieve at the end of their K-12 schooling career. The Broad Areas of Learning are for all student to: <ul style="list-style-type: none"> • Be Lifelong Learners; • Have a Sense of Self and Community; • Be Engaged Citizens
Criterion-referenced Test	An assessment that measures student progress toward specific curriculum goals or standards. Scores are reported in comparison to a predefined acceptable level of performance rather than in comparison to other students.
Cross Curricular Competencies	Cross Curricular Competencies are the means by which we help students achieve the Broad Areas of Learning. Students are guided to: <ul style="list-style-type: none"> • Develop Thinking • Develop Identity and Interdependence • Develop Literacies • Develop Social Responsibility
Differentiated Instruction	Involves providing students with different avenues to acquiring content; to processing, constructing, or making sense of ideas; and to developing teaching products so that all students within a classroom can learn effectively, regardless of differences in ability.
Error Analysis	Error analysis occurs when students examine exactly what errors they committed, and find reasons why they committed those errors.

Essential Questions	Complex questions that require justification and hook the learner. They stimulate thought, provoke inquiry and generate questions. <i>See Essential Understandings.</i>
Enduring Understanding	Complex statements that require justification and hook the learner. They stimulate thought, provoke inquiry, and generate questions. <i>See Essential Questions.</i>
Evaluation	Making decisions about the quality, value or worth of a response for the purpose of providing descriptive feedback (formative) and marks (summative).
Formative Assessment	Purposeful, ongoing collection of information about how students are learning while there is still time to improve. Both teacher and student then use the information to guide continuous improvement toward the intended learning.
Grading	The process of assigning letters or numbers at the end of a period of time (term, semester, etc.) as a way to summarize the quality of student performance.
Indicators	Indicators are a representative list of the types of things a student should know or be able to do if they have attained the outcome. <i>See Outcomes.</i>
Learning Plan	The lessons designed for students to become successful in reaching the outcomes and indicators. It includes differentiated instruction to meet student needs.
Learning Style/ Learning Preference	The way in which somebody approaches the acquisition of knowledge and skills; usually visually, auditory, or kinesthetically.
Meta-cognition	Refers to students' thinking about their own thinking.

Multiple Intelligences	Multiple intelligences is educational theory which suggests that an array of different kinds of "intelligence" exists in human beings.
Norm-referenced Assessment	A test, often one of basic skills and concepts, developed to measure one student's performance against the performance of other students of the same age and/or grade who have previously taken the same test.
Outcomes	Outcomes describe the knowledge, skills, and understandings that students are expected to attain by the end of a particular grade level in each curricular area.
Passive Learners	Students that are simply after the "right" answer, reluctant to access their intellectual curiosity, and do not take time to examine their thinking and mistakes.
Peer Assessment	Students assess each other's work according to the standards that the teacher sets.
Performance Assessment	Assessment based on authentic tasks such as activities, exercises, or problems that require students to show what they can do and ultimately, their degree of understanding. Assessment of the knowledge and/or skills displayed is based on criteria which are derived from outcomes.
Performance Task	The assignment in a performance assessment.
(No) Permission to Forget	As suggested by Lee Jenkins, a culture in schools that does not permit students to forget the material they have learned.
Procedural Knowledge	Knowledge of how to do things.

Readiness	The state or quality of being ready; preparation; promptness; aptitude; willingness.
Rubric	A fixed measurement scale and list of criteria that describe the quality of products or performances used to evaluate a student's performance.
Summative Assessment	An assessment given in class at the end of the period of study, or an external, standardized test used to summarize what students have learned up to that point. Frequently evaluations of students are made and grades are assigned based on their results.
Understanding	When a student knows what knowledge to draw upon during various learning experiences. "Understandings" stay with a student for a very long time. <i>See also doing and knowing.</i>
Understanding by Design	An evergreen planning process used to design units that begin with the end in mind. UbD identifies the evidence necessary to determine that the learning has occurred.
Unpacking	Unpacking is a term that refers to building a common understanding of outcomes and indicators by following a process of determining collaboratively what students should know, understand , and be able to do .
Zone of Proximal Development	The difference between what a learner can do without help and what he or she can do with help. The point at which students are at their optimal level for learning...neither too easy nor too hard, but challenging.

Strategies Foundational to Differentiated Instruction

Strategy Index	Definition
Anchoring activities	Specific ongoing activities on which students work independently; ongoing assignments that students can work on throughout a unit.
Anchors	Sample of student work that is matched to a specific level of performance.
Carousel	Use large sheets of poster paper to display content-related prompts around the room. Divide the class into teams, distribute one marker per team, and assign each team a prompt. Station one team at each poster and allow a measured amount of time for teams to respond to the prompt, and then ask them to move on to the next one. Each team should contribute to the prompt important information the previous team overlooked or did not have time to include. Conclude the activity with a large group discussion of the information written on the prompts.
Choice Boards	A choice board offers students a way to make decisions about what they will do in order to meet class requirements. A choice board could be for a single lesson, a week-long lesson, or even a month-long period of study.
Concept Attainment	Identification of attributes that can be used to distinguish examples of a given group or category from non-examples.
Cubing	Allows student to look at an idea from many different angles and perspectives. Offers a chance to differentiate by readiness, interest, or learning profile by selecting cube colors or by varying sides.
Entrance/Exit Cards	An assessment tool; students respond to a prompt on a card and hand it in at the beginning or end of a lesson; teachers can use information on cards to design instructional activities and to group students for learning.
Fishbone	A fishbone map (sometimes called a herringbone map) is a type of <u>graphic organizer</u> .
Fishbowl	Vocabulary words or key unit questions are kept in a container and are reviewed regularly with students. Often the results are graphed to monitor improvements. (see L to J)
Flexible Groupings	It is the purposeful reordering of students into working groups to ensure that all students work with a wide variety of classmates and in a wide

	range of contexts during a relatively short span of classroom time.
Give One, Get One	Strategy that allows ALL students to actively engage in learning; after learning about a topic; students move around the classroom or group to give a detail or something learned to someone else and get a detail or something learned from a peer.
Graphic Organizer	A visual display or diagram that makes thinking visible; students identify and display concepts and illustrate relationships pictorially.
Jigsaw	Cooperative learning strategy that enables each student of a “home” group to specialize in one aspect of a learning unit. Students meet with members from other groups who are assigned the same aspect, and after mastering the material, return to the “home” group and teach the material to their group members. Just as in a jigsaw puzzle, each piece--each student's part--is essential for the completion and full understanding of the final product.
K.W.L.	An introductory strategy that provides a structure for recalling what students know about a topic, noting what students want to know , and finally listing what has been learned and is yet to be learned.
L to J	When collecting data on student achievement, L to J is the desired shape of the graphs for the school year. The “L” shape is the required graph for the beginning of the year, the bell curve is acceptable for the middle of the school year and the “J” curve is the goal for the end of the year.
Learning Contract	An agreement between student and teacher (and perhaps parent) to outline the choices a student may make in an assignment and what requirements the student must satisfy.
RAFTS Activities	RAFTS activities take their name from the first letter of five words – Role , Audience , Format , Topic , and Strong verbs . In RAFTS, students play a specified role, for a particular audience, in a named format, regarding a topic that gets at the core of the meaning for that topic.
Scaffolding	A support system to help students to be clear about the purpose and direction of a task. It helps students stay focused, meet the expectations for quality work, find and use appropriate sources of information, and work effectively and efficiently.
TAPS	TAPS is a flexible grouping strategy that can include the Total group , working Alone , with a Partner or a Small group .
Think-alouds	It is a comprehension strategy in which a competent reader verbalizes the connections, inferences, reactions and questions that go through his or her mind while reading or performing some other skill.
Think Map	Visual representations of ideas that allow a student to “unpack” their thinking and organize ideas in a visual format.
Think-pair-share	Cooperative learning strategy to encourage thinking, talking, listening and

	sharing of ideas of all students.
Tic Tac Toe	A way to organize choices for students in a tic-tac-toe formation. Allows for some student choice as well as possible direction/expectation from teacher.
Tiered Assignments	Provide different levels of an activity to meet the different levels of student readiness for the concept being taught.
Traffic lights	A monitoring system of colored cards students use to communicate where they are at with what they are doing. Red =I can't proceed. Yellow =Check on me once in a while. Green =good to go. Blue =I'm done. (I can teach someone else) Orange =I'm done (I'm ready for the next activity).
Venn Diagram	The Venn Diagram is made up of two or more overlapping circles. They are useful for examining similarities and differences.
Wait-time	The delay between asking a question and accepting a response; increases in wait-time result in increases in student achievement.
Walk About	Use large sheets of poster paper to display content-related prompts around the room. Divide the class into teams, distribute one marker per team, and assign each team a prompt. Station one team at each poster and allow a measured amount of time for teams to respond to the prompt, and then ask them to move on to the next one. Each team should contribute to the prompt important information the previous team overlooked or did not have time to include. Conclude the activity with a large group discussion of the information written on the prompts.
Word Cycle	Students read a list of words in the middle of the circle. They select one word and place it in any circle. In the next circle, they place another word that is related to the first. They could be synonyms, antonyms, steps in a process, examples of something, and so on. They need to be prepared to finish the statement, "Word A is related to word B because..."
Word Splash	The word splash activity supports students' reading by helping to provide purpose.
You Be George	A strategy that includes students in the assessment for learning. Rather than hand out test scores and move onto the next unit, give students a template to analyze their test results.
3-2-1	Use this strategy as an exit or entrance activity to check if students understand or not.

Revised Bloom's Taxonomy (2002)

Krathwohl, D. (2002) A Revision of Bloom's Taxonomy: An Overview, *Theory in Practice*, 41(4), pp212-225.

The Knowledge Dimension	1. Remember	2. Understand	3. Apply	4. Analyze	5. Evaluate	6. Create
A. Factual Knowledge						
B. Conceptual Knowledge						
C. Procedural Knowledge						
D. Meta-cognitive Knowledge						

Structure of the Cognitive Process Dimension of the Revised Taxonomy

1.0 Remember – Retrieving relevant knowledge from long-term memory.

Recognizing
Recalling

2.0 Understand – Determining the meaning of instructional messages, including oral, written, and graphic communication.

Interpreting
Exemplifying
Classifying
Summarizing
Inferring
Comparing
Explaining

3.0 Apply – Carrying out or using a procedure in a given situation.

Executing
Implementing

4.0 Analyze – Breaking material into its constituent parts and detecting how the parts relate to one another and to an overall structure or purpose.

Differentiating
Organizing
Attributing

5.0 Evaluate – Making judgments based on criteria and standards.

Checking
Critiquing

Structure of the Knowledge Dimension of the Revised Taxonomy

A. Factual Knowledge – The basic elements that students must know to be acquainted with a discipline or solve problems in it.

Knowledge of terminology
Knowledge of specific details and elements

B. Conceptual Knowledge – The interrelationships among the basic elements within a larger structure that enable them to function together.

Knowledge of classifications and categories
Knowledge of principles and generalizations
Knowledge of theories, models, and structures

C. Procedural Knowledge – How to do something; methods of inquiry, and criteria for using skills, algorithms, techniques, and methods.

Knowledge of subject-specific skills and algorithms
Knowledge of subject-specific techniques and methods
Knowledge of criteria for determining when to use appropriate procedures

D. Meta-cognitive Knowledge – Knowledge of cognition in general as well as awareness and knowledge of one's own cognition.

Strategic knowledge
Knowledge about cognitive tasks, including appropriate contextual and conditional knowledge
Self-knowledge

Bloom's Taxonomic Verbs:

1 To remember:

To remember is to retrieve relevant information from long-term memory. (Anderson, et al., p. 67)

-choose, define, describe, find, identify, label, list, locate match, name, recall, recite, recognize, record, relate, retrieve, say, show, sort, tell.

2. To understand:

To understand is to construct meaning from instructional messages, including oral, written, and graphic communication. (Anderson, et al., p. 67)

-categorize, clarify, compare, conclude, construct, contrast, demonstrate, distinguish, explain, illustrate, interpret, match, paraphrase, predict, represent, reorganize, summarize, translate, understand.

3. To apply:

To apply is to carry out or use a procedure in a given situation. (Anderson, et al., p. 67)

-apply, carry out, construct, develop, display, execute, illustrate, implement, model, solve, use.

4. To analyze:

To analyze is to break material into its constituent parts and determine how the parts relate to one another and to an overall structure or purpose. (Anderson, et al., p. 67)

-analyze, ascertain, attribute, connect, deconstruct, determine, differentiate, discriminate, dissect, distinguish, divide, examine, experiment, focus, infer, inspect, integrate, investigate, organize, outline, reduce, solve (a problem), test for...

5. To evaluate:

To evaluate is to make judgments based on criteria and standards. (Anderson, et al., p. 67)

-appraise, assess, award, check, conclude, convince, coordinate, criticize, critique, defend, detect, discriminate, evaluate, judge, justify, monitor, prioritize, rank, recommend, support, test, value.

6. To create:

To create is to put the elements together to form a coherent or functional whole; reorganize elements into a new pattern or structure; inventing a product. (Anderson, et al., p. 67)

-adapt, build, compose, construct, create, design, develop, elaborate, extend, formulate, generate, hypothesize, invent, make, modify, plan, produce, originate, refine, transform.

Bloom's Digital Thinking: According to Andrew Churches, there is a digital way of thinking that involves the use of Blooms. Churches makes an easy and critical link to the way 21Century learners use digital technology and how that links with Blooms Taxonomy. Read Churches' online article at <http://techlearning.com/article/8670>.

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Multiple Intelligences

Verbal/Linguistic Intelligence (word smart) refers to the ability to use words and language, both written and spoken. Their skills include: listening, speaking, writing, storytelling, explaining and teaching.

SAY IT!

Logical/Mathematical Intelligence (logic smart) refers to the ability to reason, apply logic and work with number. Their skills include: problem solving, classifying and categorizing information, thinking logically, questioning, carrying out investigations, performing mathematical calculations and working with geometric shapes.

COUNT IT!

Visual-Spatial Intelligence (picture smart) refers to the ability to perceive the visual. Their skills include: understanding charts and graphs, sketching, painting, creating visual images and constructing, fixing, and designing practical objects.

PICTURE IT!

Musical Intelligence (music smart) refers to the ability to produce and appreciate music. These musically inclined learners think in sounds, rhythms and patterns. Their skills include: singing, playing musical instruments, recognizing sounds and tonal patterns, composing music and remembering melodies.

HUM IT!

Bodily Kinesthetic Intelligence (body smart) refers to the ability to control body movements and handle objects skillfully. They have a good sense of balance and hand-eye coordination. Through interacting with the space around them, they are able to remember and process information. Their skills include: dancing, physical coordination, sports, crafts, acting, miming and using their hands to create or build.

MOVE IT!

Interpersonal Intelligence (people smart) refers to the ability to relate to and understand other people. Their skills include: seeing things from other perspectives, listening, using empathy, understanding other people's moods and feelings and communicating both verbally and non-verbally.

LEAD IT!

Intrapersonal Intelligence (self smart) refers to the ability to understand ourselves, who we are, and what makes us the way that we are. Such learners are able to recognize their own strengths and weaknesses and have a capacity for self-analysis, awareness of their own inner feelings, desires and dreams, evaluating their thinking patterns and reasoning with themselves.

REFLECT ON IT!

Naturalist Intelligence (nature smart) refers to the ability to recognize and categorize plants, animals, and other objects in nature. Such learners like to be outside, with animals and like to study geography and weather. They are good at categorizing, organizing a living area, planning a trip, preservation and conservation. They learn best by studying natural phenomenon and learning about how things work.

INVESTIGATE IT!

Adapted from Differentiating Instruction in the Regular Classroom, Grades 3-12; Diane Heacox

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Helpful Websites:

http://www.sdttl.com/prof/docs/unitubd_files/ubd_ttl.ppt#1298,37,NBPTS
website for UbD (**PowerPoint**)

<http://www.middleweb.com/rubricsHG.html>
Using Rubrics in Middle School by Heidi Goodrich Andrade

www.teachermagazine.org

DI in Middle and Secondary Classrooms.
<http://www.teachersworkshop.com>

Differentiated Instruction in the Classroom www.internet4classrooms.com (multiple sites to view)

Differentiated Instruction <http://www.frsd.k12.nj.us/Page/94>

Dr. Jean Songs and Activities for Young Children. www.drjean.org